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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRUCE R. DAVID and WILLIAM J. RUSHIN

Appeal 2008-2546
Application 09/851,849
Technology Center 3700

Decided: December 29, 2008

Before: WILLIAM F. PATE, III, JOHN C. KERINS and
MICHAEL W. O'NEILL, *Administrative Patent Judges*.

PATE, III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-25. We have jurisdiction under 35 U.S.C. § 6(b).

Appellants' claims are directed to a router apparatus for removing strips of sheet metal such as aircraft skin laps.

Claim 1 is illustrative of the claimed subject matter and reproduced below:

1. An aircraft skin lap router apparatus, comprising:

a guide, fastened to the skin by fasteners drilled through the skin;
a platform, mounted on the guide;
a router having a vertical adjustment, mounted on the platform; and
a vacuum fitting, mounted on the platform, wherein an operator adjusts the router vertical adjustment for a desired depth-of-cut on the aircraft skin lap, the router cuts the skin lap, and removes debris via the vacuum fitting.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

BIRGE	376,134	Jan. 10, 1888
HUCK	2,482,620	Sep. 20, 1949
MANN	2,864,283	Dec. 16, 1958
RIBICH	3,133,339	May 19, 1964
SMITH	3,495,636	Feb. 17, 1970
KO	3,837,383	Sep. 24, 1974
HUNT	5,106,243	Apr. 21, 1992
SUZUKI	5,326,200	Jul. 05, 1994
STORNETTA	5,503,203	Apr. 02, 1996
GLOVER	5,533,845	Jul. 09, 1996
BETH	5,562,135	Oct. 08, 1996

Merriam-Webster's Collegiate Dictionary, 10th ed., pages 99-100, 1021, and 1230, copyright 1993

The Examiner rejected claims 12, 15-17 and 20-21 under 35 U.S.C. 103(a) as being unpatentable over Glover; claims 12, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hunt; claims 13 and 19 under 35 U.S.C. 103(a) as being unpatentable over either Hunt or Glover (Stated incorrectly at Brief p. 6 but correctly at Brief p. 14); claims 17 and 18 under 35 U.S.C. 103(a) as being unpatentable over Glover or Hunt in view of Ribich; claims 1-5, 7-11, 14, and 22-25 under 35 U.S.C. 103(a) as being unpatentable over Glover in view of Stornetta or Ko; claims 5 and 6 as being unpatentable over Glover in view of Stornetta or Ko, and further in view of Ribich.

ISSUES

The issues on appeal are as follows:

- 1) Have Appellants established that the Examiner erred in rejecting claims 12, 15-17 and 20-21 under 35 U.S.C. 103(a) as being unpatentable over Glover?
- 2) Have Appellants established that the Examiner erred in rejecting claims 12, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hunt?
- 3) Have Appellants established that the Examiner erred in rejecting claims 13 and 19 under 35 U.S.C. 103(a) as being unpatentable over either Hunt or Glover? (Stated incorrectly at Brief p. 6 but correctly at Brief p. 14).
- 4) Have Appellants established that the Examiner erred in rejecting claims 17 and 18 under 35 U.S.C. 103(a) as being unpatentable over Glover or Hunt in view of Ribich?

5) Have Appellants established that the Examiner erred in rejecting claims 1-5, 7-11, 14, and 22-25 under 35 U.S.C. 103(a) as being unpatentable over Glover in view of Stornetta or Ko?

6) Have Appellants established that the Examiner erred in rejecting claims 5 and 6 as being unpatentable over Glover in view of Stornetta or Ko, and further in view of Ribich?

FINDINGS OF FACT

1. Glover discloses (cols. 3-4) an aircraft skin lap router apparatus 2, comprising: a guide 30, fastened to a workpiece 10 by fasteners (elements connecting 33 & 32) drilled into the workpiece; a platform 12 mounted on the guide 30; a router 16, 43, 45, 51, 41, 53, 61, 60, 3, 14 having a vertical adjustment 14, mounted on the platform 12; wherein an operator is capable of adjusting the router vertical adjustment 14 for a desired depth-of-cut on the workpiece 10 and the router is capable of cutting the workpiece 10.

2. Glover contemplates use of the apparatus with a range of aircraft and marine components.

3. Glover teaches attachment sites 32 (on the apparatus) will be customized for each particular application and workpiece (col. 3, ll. 37-38) and to make use of any existing bolt pattern on the workpiece (col. 3, ll. 39-43).

4. Glover is silent as to whether the attachment sites 33 employed in the preferred embodiment are drilled through the workpiece 10.

5. Glover teaches the workpiece may be an aircraft wing (col. 3, ll. 27-28), a portion of which may be sheet metal (thickness may be observed at

holes in Fig. 4) having holes drilled therethrough (at least 6 may be seen in Fig. 4).

6. Hunt discloses (cols. 2-3) a sheet metal router apparatus (Fig. 1-4) comprising a guide 10, 18, fastened to a work surface by fasteners (Fig. 3) drilled into the work surface (e.g., 109), a platform 26, 42 mounted on the guide 10, 18 and a router 44 having a vertical adjustment 72, 70, mounted on the platform (at 42), wherein an operator may adjust the router vertical adjustment for a desired depth-of-cut and move the platform along the guide to make a desired cut.

7. Hunt does not specifically disclose that the work surface may comprise sheet metal.

8. Hunt is silent regarding whether the fasteners used to attach the guide 10, 18 to the work surface 109 are drilled through the work surface.

9. Replacing the sheet metal skins of an aircraft is known in the prior art (Spec. p. 2; Fig. 9a-b).

PRINCIPLES OF LAW

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) reaffirmed the familiar framework for determining obviousness as set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), but stated that the Federal Circuit had erred by applying the teaching-suggestion-motivation (TSM) test in an overly rigid and formalistic way. *KSR*, 127 S.Ct at 1741. Specifically, the Supreme Court stated that the Federal Circuit had erred by concluding that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try. *KSR*, 127 S.Ct at 1742. A person of ordinary skill has good reason to

pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product was not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103. *Id.*

Where no explicit definition for a term is given in the specification, the term should be given its ordinary meaning and broadest reasonable interpretation. *E-Pass Technologies, Inc. v. 3Com Corporation*, 343 F.3d 1364, 1368 (Fed. Cir. 2003). The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s). *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). The broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, takes into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). Reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim, to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim. *In re Prater*, 415 F.2d 1393 CCPA 1969). Although the claims are interpreted in light of the specification, limitations from the specification are

not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

ANALYSIS

Initially, we note there exists some uncertainty as to whether the “skin” or “sheet metal” itself is a required element of the claim or, as suggested by the Examiner, merely an object of intended use (Answer p. 18). Accordingly, we must determine whether the claims are directed toward the combination of the router apparatus and the skin or sheet metal or merely the subcombination of the router apparatus. Terming the apparatus “An aircraft skin lap router apparatus” or “A sheet metal router apparatus” in and of itself is not indicative of Appellants’ intent to include the skin or sheet metal as an element of the claim. However, where there is some positive structural limitation requiring the presence of the skin or sheet metal, e.g., “a guide, fastened to the skin” it becomes evident that Appellants intended the scope of the claim to cover the combination of the router apparatus and the skin or sheet metal. This interpretation is further supported by Appellants’ statements in the record alleging that: the fact that the claimed fasteners are drilled through the skin serves to distinguish the claim from the prior art (Brief p. 7).

Appellants argue that the Examiner erred in rejecting claims 12, 15-17 and 20-21 as obvious over Glover; claims 1, 2, 5, 7-11, 22 and 24 as obvious over Glover in view of Stornetta or Ko; because Glover fails to teach or suggest fasteners drilled “through the sheet metal” as required by claim 12 and 24; or “through the skin” as required by claims 1 and 22 (Brief p. 7-8, 16, 18). These arguments are not persuasive. The fact that this feature is not expressly taught in Glover does not necessarily mean that Glover would not

have reasonably suggested it to one having ordinary skill the art. A finding of lack of novelty does not preclude a finding of obviousness. Glover suggests making use of any existing bolt pattern on a range of aircraft components (Facts 2 and 3). It is known in the art that aircraft components may comprise skin or sheet metal (Facts 5 and 9). It is also known in the art that aircraft components may have through holes (Fact 5). From these facts the Examiner concludes that one of ordinary skill in the art would have pursued these known options, with a reasonable expectation of success, in order to yield the predictable result of fastening to the sheet metal or skin of an aircraft with fasteners drilled through that skin or sheet metal. This conclusion is reasonably drawn based on the suggestion of Glover.

Appellants argue that the Examiner erred in rejecting claims 12, 15-17 and 20-21 as obvious over Glover; claims 1, 2, 5 and 7-11 over Glover in view of Stornetta or Ko; and claim 3 as obvious over Glover in view of Stornetta and Ko; because Glover fails to teach or suggest a router as required by claims 1, 3, 12, 15, 16, and 21. This argument is premised on the notion that Glover teaches a milling machine and makes no mention of a “router” (Brief p. 8-9, 12, 16-17). Appellants do not point to any explicit definition for the term “router” in the specification. Accordingly, the term “router” is afforded its ordinary meaning and broadest reasonable interpretation. The components 16, 43, 45, 51, 41, 53, 61, 60, 3, 14 are responsible for the cutting and vertical adjustability. Despite the fact that they are not specifically termed a “router” by Glover, these components may reasonably be construed to define a router within the broadest reasonable interpretation of that term. When Glover refers to a “portable milling tool” that term encompasses both the router components 16, 43, 45, 51, 41, 53, 61,

60, 3, 14, the frame 12, subassembly 30 and alignment means 18, 19. Even if we were to adopt Appellants' requirement that the term "router" implies some portability and a single degree of freedom, the Glover router would still meet this limitation. It is adjustable only in the direction of the depth of the workpiece, and being a subcomponent of a portable mill, it would be portable itself. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Appellants argue that the Examiner erred in rejecting Claim 17 as obvious over Glover because the Examiner has not pointed to any specific passage of Glover to meet the limitation of an end mill attached to the router (Brief p. 11). This argument is not persuasive. Appellants have presented no reasoning as to why bit 61 may not properly be considered an end mill within the broadest reasonable interpretation of that term. Furthermore, Appellants have presented no reasoning as to why the suggestion of employing a "conventional" bit configured to "adopt a variety of configurations" (col. 4, ll. 10-15) would not render the claimed end mill obvious.

Appellants argue that the Examiner erred in rejecting Claim 20 as obvious over Glover or Hunt; and claims 22 and 24 as obvious over Glover in view of Stornetta or Ko; because neither Glover nor Hunt teaches or suggests a bearing. This argument is not persuasive. Appellants asserts that the protruding dovetail member of platform 12 could not reasonably be construed as a bearing because it lacks anti-friction properties (Brief p. 14, 19) and is not independent of the platform (Reply Brief p. 4-5). Appellants do not point to any explicit definition for the term "bearing" in the specification. The term "bearing" is therefore afforded its ordinary meaning

and broadest reasonable interpretation. The ordinary meaning of the term bearing does not inherently require an element that possesses anti-friction properties. If that were the case, phrases such as “anti-friction bearing” would be redundant. A bearing is an element that provides, or is for providing, support in at least one direction, generally for movement (Merriam-Webster definitions 3a & b). The term “bearing” is in the nature of a functional definition. Interpreting an element to be a bearing will depend on the function of that element. Since an element not having anti-friction properties may be used to provide support for another moving element, it may properly be considered a “bearing” within the ordinary and customary meaning of that term. Furthermore, since a portion of an element may be used to provide support for a moving element, that portion may properly be considered a bearing within the ordinary and customary meaning of that term. The Examiner has reasonably concluded that the phrase, “a bearing mounted on the platform” does not necessarily require “an anti-friction bearing mounted on, and movable with respect to, the platform” as Appellants contend. Accordingly, the Examiner has reasonably construed the cited features of Glover and Hunt to meet the limitation of claims 20, 22 and 24 pertaining to a “bearing.”

Appellants argue that the Examiner erred in rejecting claims 12, 17 and 20 as obvious over Hunt because Hunt fails to teach or suggest fasteners drilled “through the sheet metal” as required by claim 12 (Brief p. 12-13). This argument is not persuasive. The fact that this feature is not expressly taught in Hunt does not necessarily mean that Hunt would not have reasonably suggested it to one having ordinary skill in the art. Hunt contemplates (e.g., Fig. 3) using bolts in order to fasten the guide (18, 10) to

a work surface (e.g., 109). The depth of the hole in the work surface accepting the bolts is undisclosed. However, there are a finite number of identified predictable solutions concerning the penetration of the hole into the work surface, namely, the hole may be a blind hole or a through hole. Employing a through hole to attach the guide to the work surface constitutes choosing from a finite number of identified predictable solutions with a reasonable expectation of success. Thus the use of a through hole is obvious to try. *See KSR* at 1742. Choosing the known option of a through hole is the product not of innovation but of ordinary skill and common sense and therefore would have been obvious to one having ordinary skill in the art.

Appellants argue that the Examiner erred in rejecting claims 13 and 19 as obvious over Glover or Hunt because MPEP 2143 does not contain an example of the Examiner's position that selecting a particular tolerance (C13) or material (C19) would have been an obvious matter of design choice (Brief p. 14-15). This argument is not persuasive. Firstly, in addition to some exemplary rationales to support the conclusion of obviousness, MPEP 2143 also provides, "Note that the list of rationales provided is not intended to be an all-inclusive list. Other rationales to support a conclusion of obviousness may be relied upon by Office personnel." Secondly, the Examiner has not made a mere conclusory statement, but instead has articulated a line of reasoning, based on factual underpinnings, to support the conclusion of obviousness. (Answer p. 9-10, Final Office Action p. 8-9). Appellants have not offered any arguments to rebut the Examiner's rationale or findings of fact on these issues (Brief p. 14-15; Reply Brief p. 6), and therefore, have not established error by the Examiner in rejecting claims 13 and 19.

Appellants argue that the Examiner erred in rejecting Claim 4 because the Final Office Action sets forth a rejection of this claim without specifically discussing it. This argument is not persuasive. The Examiner has presented significant evidence, which Appellants do not rebut, to show that the Appellants were provided with adequate notice of both the grounds for rejection of claim 4 and the underlying rationale in support thereof. *See In re Pearson*, 494 F.2d 1399, 1402 n.2, (CCPA 1974) (applicant was fully informed substantively, even if not formally, of the legal basis for the rejection). The Examiner, in rejecting claim 22, established that it would have been obvious to include speed adjustment, and Appellants did not successfully rebut that finding. Where an Appellants' remarks do not point to any specific language within the claims to distinguish over the prior art, those remarks amount to a general allegation that the claims define a patentable invention. Such allegations will not be considered an argument for separate patentability. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Appellants argue that claims 5-6 are allowable because they depend from claim 1. Since we have concluded that the Examiner has not erred in rejecting claim 1, this argument is not persuasive.

Claims 14, 18, 23, and 25 were not separately argued, and thus stand or fall with the claims from which they depend.

CONCLUSIONS OF LAW

On the record before us, Appellants have not established that the Examiner erred in rejecting;

1) claims 12, 15-17 and 20-21 under 35 U.S.C. 103(a) as being unpatentable over Glover;

2) claims 12, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hunt;

3) claims 13 and 19 under 35 U.S.C. 103(a) as being unpatentable over either Hunt or Glover;

4) claims 17 and 18 under 35 U.S.C. 103(a) as being unpatentable over Glover or Hunt in view of Ribich;

5) claims 1-5, 7-11, 14, and 22-25 under 35 U.S.C. 103(a) as being unpatentable over Glover in view of Stornetta or Ko; and

6) claims 5 and 6 as being unpatentable over Glover in view of Stornetta or Ko, and further in view of Ribich.

DECISION

For the above reasons, the Examiner's rejection of claims 1-25 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

vsh

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